



# A Study on Factors Affecting Vasectomy in Ahmedabad City of Gujarat

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## ABSTRACT

**Background:** Out of all the family planning methods available vasectomy is the least preferred method.

**Objectives:** The objective of the study was to study various factors affecting vasectomy.

**Methods:** Record based study with a qualitative component Records of 50% beneficiaries (136) out of total 260 vasectomy operation done in 2014-15 in Ahmedabad city were studied and 10% were interviewed . Data was analyzed using Epi info software.

**Result:** Mean age of the vasectomy beneficiaries was 37.9 years (SD 6.0) .Mean number of children with the couple were 2.44. Mean age of the last living child was 7.7 years (SD 5.5) .About more than half of the beneficiaries had two children. The last living child was male in 56% and 91% (124) couple had at least one male child in the family. Education of the husband was statistically significantly related to the age of deciding vasectomy and total number of children. Personal interview with beneficiaries revealed that in 12 out of 13 beneficiaries it was a joint decision of the couple .Wife and health worker were the main motivators. They were not told about precautions to be followed till sterilization is achieved.

**Conclusion:** Vasectomy is a less preferred method because of various myths associated with it

**Key Words:** Keywords: Permanent sterilization, Vasectomy,

## INTRODUCTION

Contraceptive methods available in India under National Family Welfare program can be broadly divided into spacing and permanent methods. Tubectomy and vasectomy falls under permanent methods. When introduced, vasectomy was of incisional (conventional) type but now it is NoScalpel Vasectomy (NSV) which is practised everywhere. No scalpel vasectomy was developed and first performed in China in 1954 by Dr. Li Shunqiang of Family planning Scientific Research Institute of China.<sup>1</sup> As per the latest data, Condom is the most preferred method and sterilization the least adopted method among the family planning acceptors in India, comprising about just 14%.<sup>2</sup> In

2014-15, total 4127485 couples underwent sterilization, out of which 97.9% were tubectomy and only 2.1% were vasectomy.<sup>3</sup> In Gujarat, out of total sterilization operation done in 2014-15, vasectomy constituted only 0.69% (Source: HMIS Report 2014-15, MOHFW).<sup>3</sup>

Sterilization adopters had decreased by 2.7 lakh (6.3%) in 2014-15 as compared to 2013-14.<sup>2</sup> Highest vasectomies had been reported from Sikkim and no vasectomy had been reported from Mizoram and Daman and Diu.<sup>2</sup>

Vasectomy is one of the least used methods in the developing world. Vasectomy was the most important method from 1952 to 1977 and diminished later. Incentive has played a prominent role in its

promotion in India, Sri Lanka and Nepal and Bangladesh<sup>4</sup>. Also it is one of the few available methods that involve men directly. As a medical procedure vasectomy is less complicated and had fewer health consequences than female sterilization<sup>4</sup>. NSV results in fewer hematoma and infection.<sup>4</sup> Vasectomy has been unappealing to men as myths persist that it threatens male virility, causes weakness or impairs sexual function. It has a pregnancy rate of 0 to 2.2% and most failure can be controlled by proper follow up and instruction to the men undergoing the procedure.<sup>4</sup> Thus this study was conducted to understand socio demographic factors influencing vasectomy and some socio cultural factor which influence the decision of vasectomy.

### OBJECTIVES:

The research was done to study various socio demographic factors influencing vasectomy and to correlate social factors with decision of vasectomy by follow up qualitative study.

### MATERIALS AND METHODS

Family planning operations reported in Ahmedabad Municipal Corporation (AMC) in the year 2014-15 were 25,121 and out of it vasectomies were 260(1.03%) and rest were tubectomies (98.97%) (Unpublished Annual Family planning report 2014-15, AMC)

The study was done in AMC during April 2014 to March 2015. It was a Descriptive cross sectional record based study with a qualitative component. Out of total vasectomies done, 50% were studied for descriptive purpose and further 10% of this sample was studied for qualitative purpose. Thus records of 136 vasectomy beneficiaries and in depth interviews of 13 of them was done. For quantitative component, High performing Urban Health Centres (UHCs) were enlisted according to their performance in terms of vasectomy operations in 2014-15 (more than 10 vasectomy operations performed during the year) and beneficiaries were selected from those high performing UHCs till the desired sample was obtained. The variables available were: Age, Education, Total no of children, Sex of all the living children, Age of the last living child and the Sex of the last living child.

For qualitative component 10% vasectomy beneficiaries from one of the high performing UHCs (purposely selected) were taken. So 13 beneficiaries were interviewed by structured in depth interview method using predesigned and pre tested open ended questionnaire after obtaining written informed consent.

Statistics: Data collected was entered and analyzed using Epi info software. Calculation of percentage, proportion, mean, Standard Deviation and Chi square test were done.

Limitation of the study: Data in the records was missing for many variables. 100% complete information of all the variables was found in only 75 out of 136 records (54.7%). It was difficult to convince vasectomy beneficiaries for the interview as majority preferred not disclosing their fertility status in society. Thus out of many contacted only 13 could be interviewed.

### RESULTS

On studying the records of 136 vasectomy beneficiaries, 35 to 39 years (31.4%) emerged as the most common age group who underwent vasectomy. About 5% males were beyond 50 years and 4% were between 25 to 30 years. Mean age of the vasectomy beneficiaries was 37.9 years (SD 6) and range was 25 to 54 years and those of their wives was 34.3 years (SD 6) and their range was 23 to 50 years. Mean age of the last living child was 7.7 years (SD 5.5) with range of 2 month to 25 years. In 20 of the couple (16.67%) the age of last living child was beyond 15 years.

Majority of the beneficiaries, 56 (41.2%) studied up to primary level, 31(22.8%) studied up to secondary level and 18 (13.2%) were illiterate. About more than half, 83(61%) of the couple had two children and 47 (34%) had three or more children, whereas about six couple underwent sterilization after having only one child. The last living child was male in 42(56%) cases and it was female in 33(44%) cases out the data available (75 records) for the sex of last living child but 124(91.17%) couple had at least one male child in the family. On establishing the association between education level of the beneficiaries and age at deciding for vasectomy, among those educated upto primary level about 53% underwent vasectomy at the age below 35 and those educated beyond primary level 70% underwent vasectomy after the age of 35 years and it was found statistically significant ( $p=0.02$ ). On associating the number of children in the family with educational status, among beneficiaries educated upto primary level almost 90% underwent vasectomy after having less than/equal to 3 children whereas in those educated beyond primary 97% underwent vasectomy after having more than 3 children and it was found statistically highly significant ( $p=0.00$ ). However there was not statistically significant association of education on age of the last living child and presence of male child in the family (Table 1)

**Tables 1: Association of different variables with the education status**

Variable	Educational status		Total (%)	P value*	OR(C.I)#
	Upto Primary (%)	Beyond Primary (%)			
<b>Age at Vasectomy (yrs)</b>					
≤35	39(78)	11(22)	50(100)	0.02	2.6 (1.1-6.1)
>35	35(57.34)	26(42.62)	61(100)		
Total	74(66.66)	37(33.33)	111(100)		
<b>No. of Total children</b>					
>3	8(18.18)	36(81.81)	44(100)	0.00	0.0034 (0.00-0.02)
≤3	66(98.50)	1(1.49)	67(100)		
Total	74(66.66)	37(33.33)	111(100)		
<b>Age of the last Living Child (yrs)</b>					
<1	4(66.66)	2(33.33)	6(100)	0.82	1.2 (0.21-6.93)
≥1	58(62.37)	35(37.63)	93(100)		
Total	62(62.63)	37(37.37)	99(100)		
<b>Presence of male child</b>					
At least one male child	70(69.31)	31(30.69)	101(100)	0.12	3.38 (0.89-12.86)
No male child	4(40)	6(60)	10(100)		
Total	74(66.67)	37(33.33)	111(100)		

\* Chi square , # OR: Odds Ratio and CI: Confidence Interval

Qualitative study: All the 13 beneficiaries interviewed had at least one male child and in 6 cases the couple did not have female child. In 12 out of 13 beneficiaries the decision was taken by the couple by mutual understanding. It was found that in almost all the cases wife and the health worker were the motivators behind the operation. As far as fear and concerns before vasectomy operation four out of thirteen beneficiaries were concerned about the long term effects on their sexual life after the procedure. But it was found that none of the beneficiary had faced any problems in sexual life or complication after the operation. Only two beneficiaries out of thirteen were given some advice like avoiding the bath and keeping the wound clean and dry. None of the beneficiaries were told about how long to abstain or use alternative contraceptive till sterilization is achieved. Before operation, eleven beneficiaries perceived that operation does not affect physical strength, however all of them experienced that there was no reduction in physical strength after the operation. In all the cases wife knew about the vasectomy procedure done on the husband and in 5 and 3 cases additionally family and relative knew about the procedure respectively. All the beneficiaries knew that vasectomy operation was less risky as compared to tubectomy. All the beneficiaries perceived that the main reason behind non acceptance of vasectomy in the community was concern about its effect on sexual life. In all, the beneficiaries were satisfied and felt no complication and were ready to motivate other target couples in the community.

## DISCUSSION

Practice of vasectomy in AMC for 2014-15 was reported to be 1.03% only and study done by Ajeet

Saoji et. al among married men in Central India regarding contraceptive practice also found it to be only 1%.<sup>5</sup> And a similar study in rural Ahmedabad by Bhavna Puwar et al showed that out of all sterilization operation, vasectomy constituted only 0.8%.<sup>6</sup> Thus vasectomy was found to be least practiced method of family planning. In this study we attempted both qualitative and quantitative method. Record based component revealed that the mean age at vasectomy was 38 years with range from 25 to 54 and in a study done by Sanjay Sharma et al reported similar findings with mean age about 36 years with range from 23 to 52 years.<sup>7</sup> Undergoing vasectomy at an older age may be due to the good incentives offered to the beneficiaries. In a study by Dr. Afifa Zafer about 56% couple had two child<sup>8</sup> whereas we found that 61 % of couple had 2 children. Study done by Dr Afifa Zafer et al. quotes that 4.89% couple decided for sterilization operation without having any male child and in our study 12 (8.82 %) couple decided to do so without having any male child<sup>8</sup>. Thus about 91% underwent permanent sterilization after having at least one male child. This show that even today preference for male child is strongly prevalent in our society. The relationship of education of beneficiaries was not statistically significant with the presence of male child in the family in our study. We found that education of the beneficiaries was statistically significant in deciding the number of children in the family, similar finding was observed by a study by Bhavna Puwar et al<sup>6</sup>

In depth interview of vasectomy beneficiaries was done to explore the factors behind less acceptance of vasectomy as a permanent method of contraception. It was difficult to convince them for interview because their fertility status was not known in the society and visiting their house may disclose it.

This kind of attitude shown by the beneficiaries indirectly points that vasectomy is not looked upon as a good choice of family planning method in the society. Another study has also pointed out that couples were reluctant to discuss on vasectomy issue.<sup>9</sup> In our study in 12 out of 13 beneficiaries the decision was taken by the couple by mutual understanding whereas a study by Samarjeet Kaur et al found that in 73% cases husband was the decision maker.<sup>10</sup> We found that in almost all the cases wife and the health worker were the motivators behind the operation whereas Sameer Valsangkar reported in the study the males who already had vasectomy served as source of information for others.<sup>11</sup> None of the beneficiary had faced any problems in sexual life or complication after the operation in our study and a study by Dr. Devejit Choudhary et al on vasectomy beneficiaries also reported similar findings.<sup>12</sup> Various studies done to find the reason behind non acceptance were fear of loss of libido, weakness, fear of surgery, fear of failure, fear of society and also it was looked upon as women duty to undergo operation, wage loss, wife does not approve husband undergoing vasectomy, lack of information.<sup>7,9,13,14,15,16</sup> In our study also, four out of thirteen beneficiaries were concerned about the long term effects on their sexual life after the procedure and they also perceived that the main reason behind non acceptance of vasectomy in the community was concern about its effect on sexual life. Post operative advice and care is important for prevention of complication and failure resulting in unwanted pregnancy. Only two beneficiaries out of thirteen were given some advice but none of the beneficiaries were told about how long to abstain or use alternative contraceptive till sterilization is achieved. Another study found that in 75% cases beneficiaries were informed<sup>11</sup>.

Before operation, eleven beneficiaries perceived that operation does not affect physical strength, however all of them experienced that there was no reduction in physical strength after the operation. In one study males expressed their reluctance for vasectomy as society look down upon those who opt for vasectomy and think them as impotent which may be one of the reason why beneficiaries hide their status in the family and society. In our study, all wives knew about the vasectomy procedure done on their husband and in few cases additionally family and relatives also knew about it respectively. A study in Uttar Pradesh also reported that men would not tell other people if they had been sterilized fearing being shamed and taunted by others as impotent.<sup>16</sup> The label of impotency is attached to vasectomy which refrain them from even considering vasectomy as an option of contraception.

In our study all the beneficiaries knew that vasectomy was less risky as compared to tubectomy. But in one of the study, it was found that awareness in this regard was lacking, and yet another study found more than half believe that tubectomy has lesser side effect, complication and is easy operation.<sup>15,13</sup> In our study, all beneficiaries were satisfied and were ready to motivate other target couples in the community. A study by Balaiah et al among married men in rural Maharashtra also reported that none of the vasectomy beneficiaries had any dissatisfaction with the method<sup>9</sup> and another studies quoted that beneficiaries were good source of motivators in convincing the target couples.<sup>7,11</sup> A project in Uttar Pradesh also stated that to promote NSV sterilized men should speak out to other men about their experience.<sup>16</sup>

## CONCLUSION

All the eligible couple must be informed about vasectomy as a choice of permanent sterilization with proper counseling about its advantages over tubectomy, failure rates, side effects and myths revolving around it. Vasectomy acceptors must be informed about post operative proper care and of using alternative contraceptive till sterilization is achieved. All satisfied clients of vasectomy can be used as influencer for giving a push to the program for acceptance of vasectomy in the community. Quality of record keeping should be improved at all levels.

## REFERENCES

1. No Scalpel Vasectomy: An illustrated guide for surgeons, 3rd edition, USA, Engender health, 2003, Available at: <https://www.engenderhealth.org/pubs/family-planning/nsv-illustrated-guide.php>, Accessed on: March 16<sup>th</sup>, 2017.
2. Summary of Health and family welfare program in India: Executive summary, Available at: <https://nrhm-mis.nic.in/...Statistics2015/6.Executive%20Summary%20and%20Overvi...>, Accessed on March 16, 2017
3. Annual Report 2014-15, Department of health and family welfare, Ministry of Health and Family Welfare, Government of India, Available at: [www.mohfw.nic.in/WriteReadData/l892s/5658789632541236.pdf](http://www.mohfw.nic.in/WriteReadData/l892s/5658789632541236.pdf), Accessed on March 16<sup>th</sup>, 2017
4. Vasectomy and national family planning program in Asia and Latin America- Suzanne L Cohen, Dept. of Maternal and child health, School of public health, Available at: <https://www.k4health.org/.../vasectomy-and-national-family-planning-program-in-asia>, Accessed on: March 16<sup>th</sup>, 2017
5. Ajeet Saoji, Ragvendra Gumashta, Shilpa Hajare et al. Denial mode for vasectomy among married men in central India: causes and suggested strategies Journal of Psychology and Psychotherapy 2013; 3 (4): 120
6. Bhavna Puwar, Vaibhavi Patel, Minal Patel. Factors affecting sterilization operation among couples of rural area in Ah-

- medabad. A record based study Indian journal medical sciences 2012; 66 (11-12): 267-72
7. Sanjay Sharma, Ratnakar Sharma, Suleman choudhary. A study on male sterilization with no scalpel vasectomy J K Science 2014;16(2):67-70
  8. Dr.Afifa Zafer, Dr. Kusum Gaur, Dr. Suresh Kevalramani et al. Study of vasectomy adopter with special reference to motivational factor International journal of science and research Publication 2013; 3(9):1-4
  9. D Balaiah, M. Ghule, D.D. Naik, et al. Fertility attitudes and family planning practices of men in a rural community of Maharashtra Journal of Family welfare, 2001,47(1):56-67
  10. Samarjeet kaur, Arun Kumar srivastava, Dinesh singh Martolia et al. Male participation in acceptance of family planning methods National journal of medicine and allied science 2014;2(2):24-28
  11. Sameer Valsangkar, Surendranath K. Sai, Samir D. Bele et al. Predictors of no-scalpel vasectomy acceptance in Karimnagar district, Andhra Pradesh Indian. Journal of urology 2012;28(3):292-296
  12. Suwarna Madhukumar, MB Pavithra. A study about perceptions, attitude and knowledge among men toward vasectomy in Bangalore rural population IJMSPH 2015; 4(8):1066-1070
  13. M. Vijay Kumar, M. L. Surya Prabha. Knowledge, attitude and practice regarding vasectomy among married men in rural area Journal of Health sciences 2015; 3(1):59-61
  14. Aditya sood, Parika Pahwa. Vasectomy a study of beliefs , attitudes ,Knowledge and practices among literate men in Punjab, India International journal of Reproductive contraceptive, obstetric and gynecology 2104;3(2):418-423
  15. USAID. The Respond Project study series, Contribution to Global knowledge, Report No 3, Factors affecting acceptance of vasectomy in Uttar Pradesh: Insight from community based participatory qualitative research USA. Engender health, 2011
  16. Devejit Choudhary. No scalpel vasectomy in promoting male sterilization Valley international journal 2014;1(6):328-332